

ABSTRACT

INTRODUCTION :

Basic Etiology of Diabetic Foot Plantar Ulcer(DFU) involves Pressure with cycles of repetitive stress. The central tenet of any DFU treatment is adequate debridement with adequate pressure relief (Off Loading). This study was done to assess the efficacy of Mandakini offloading device in the treatment of DFU in terms of an ideal off loading features, duration of healing of ulcer

METHOD: Total of 110 patients with Diabetic Plantar Ulcer were included in this study. They underwent screening for a period of one to two weeks to stabilize the wound and institute appropriate medical and surgical lines of treatment like diabetic control, control of infection, wound debridement, correction of anemia and other medical illnesses. After the initial screening period the eligible patients were divided randomly into test group – 55 patients and control group – 55 patients.

Test group: The Mandakini offloading device was applied to the patients. Dressing was changed once a week and review was done weekly for 4 to 6 weeks.

Control group: The conventional dressing was applied and it was changed as and when required and review was done weekly for 4 to 6 weeks.

The wound response was evaluated weekly using a VISUAL SCORE, both in case of Mandakini offloading device and conventional dressing.

RESULTS :

1. The number of patients with no necrotic tissue were significantly higher in Test group at 3rd week of follow up ($P=0.277$) at 4th week (**$P<0.001$**), at 5th week (**$P<0.001$**), at 6th week (**$P<0.001$**) when compared to Control group.

2. The number of patients with 75-100% of wound filled by granulation tissue is significantly higher in test group at 3rd week follow up ($P=0.012$), at 4th week ($P=0.003$), at 5th week ($P=0.077$) and at 6th week (**$P<0.001$**) when compared to control group.

3. The number of patients with no wound surface (NIL) is significantly higher in test group at 3rd week follow up ($P=0.025$), at 4th week ($P=0.015$), at 5th week (**$P<0.001$**) and at 6th week (**$P<0.001$**) when compared to control group.

CONCLUSION :

The study shows the fine efficacy of Mandakini offloading device in terms of duration of healing of ulcer, no infection and no recurrence.

- It is an ideal offloading device for low socio economic people
- It Reduces the duration of healing of ulcer compared to conventional dressing.
- It completes the criteria to be called an ideal off loading device

KEY WORDS : Diabetic Plantar ulcer , Off loading, Mandakini Off loading device, Granulation Tissue, Necrotic tissue.